



MEMORANDUM

TO: Joe McNamara, Cory Peruba, Carus Chemical, LLC

FROM: Alan Kalmar, Jeff Stofferahn, REM

DATE: January 25, 2023

RE: Demolition Debris Sampling

R3 Environmental Management Inc. (REM) has prepared this sampling plan to address characterization of building demolition debris generated from a recent building fire at the Carus Chemical LLC facility in - LaSalle, Illinois.

Recent sampling of other waste streams generated from the fire, including concentrated water and sludge containing potassium permanganate and its thermal degradation and oxidation byproducts including primarily manganese dioxide, has been conducted. Analyses of these samples for full RCRA characterization revealed the contaminated water is RCRA characteristic for corrosivity, possessing an elevated basic pH as a result of contamination from potassium hydroxide. This waste also tested positive as an oxidizer utilizing starch-iodine test paper. The sludge also tested positive as an oxidizer utilizing starch-iodine test paper. Otherwise, no other RCRA characteristic has been exceeded in these samples. A random composite of debris also revealed no RCRA characteristics.

There is approximately 300 cubic yards of demolition debris requiring characterization and disposal on an expedited basis. This debris consists primarily of concrete, brick and associated mortar, and wood, contaminated with the aforementioned sludge. To characterize this material, a total of three composite samples will be collected, each representative of approximately 100 cubic yards of debris. Each composite will consist of a minimum of four to a maximum of eight aliquots of the more porous debris materials including wood and brick mortar, and debris fines that may be present. Individual aliquots will be marked with pin flags and documented with photographs.

Individual aliquots of approximately equal volume will be collected on a grab basis. The material will be further divided and composited in the field to the maximum extent practical. Each composite sample will consist of approximately 16 ounces (by fluid volume measure) that will be placed into a laboratory provided glass container. Additional material will undergo field testing for oxidizing potential by placing approximately 4 ounces (by fluid volume measure) into laboratory provided filter paper. Enough distilled water will be passed through the waste to generate no more than 10 milliliters of filtrate. Starch-Iodine test paper will be used to test the filtrate for oxidizing potential.

Non-disposable sampling equipment will be decontaminated prior to collection of each sample, by removing gross contamination, washing in low-sudsing cleaner, and rinsing with distilled water. Decontamination between individual aliquot locations will consist of removal of gross contamination.

Each composite sample will be iced and sent under chain-of-custody to an NELAC and Illinois-accredited laboratory for full RCRA characterization.